

Comments

The enclosed is responsive to the Examiner's Office Action mailed on July 18, 2002. At the time the Examiner mailed the Office Action, claims 1 through 32 were pending. By way of the present response, the Applicant has: 1) canceled claims 1 through 11 and 32; 2) amended claims 12, 15, 17, 19, 21; and, 3) added new claims 33 through 44. As such, claims 12 through 31 and 33 through 44 are presently pending. The Applicant respectfully requests reconsideration of the present application and the allowance of claims 12 through 31 and 33 through 44.

The Examiner has rejected claim 31 under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant respectfully disagrees with the Examiner's position. Often, reducing the design of an electronic circuit to a photolithographic mask set is a necessary step in reducing the circuit to actual practice. Circuit designers are often respective of the manufacturing process used to manufacture their designs; and, likewise are often involved or cognizant of the making of its corresponding mask set. Moreover, a brief discussion is provided in the application from Page 5, line 9 through Page 6, line 2.

The Examiner has rejected independent claim 12 under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,078,595 (hereinafter, "Jones"). "To anticipate a claim, the reference must teach every element of the claim" MPEP 2131.

With respect to Applicant's claim 12, note that Applicant's claim 12 recites:

" . . . said switch card interfaces having input/outputs in an arrangement that functionally mates to an ATM switch card and that functionally mates to a SONET switch card"

After careful review of Jones, it is clear that Jones does not disclose, teach or suggest each and every one of the claim elements recited above. In particular, Jones does not disclose teach or suggest the use of a SONET switch card. As is

well understood in the art, even though ATM cells can be carried through a SONET physical layer, ATM switching is different than SONET switching. See, Applicant's Specification, page 4, line 12 to page 5, line 8. As such, an ATM switch card is a different card than a SONET switch card.

As such, although Jones makes one reference to the term "SONET" (Col. 6, line 63), this reference does not apply (nor could it be reasonably construed to apply) to the role of the switch cards 32a, 32b (as observed in Figure 2) of Jones. Better said, the switch cards 32a, 32b of Jones can only be construed as performing ATM switching; and, as such, the use of a "SONET switch card" can not be deemed disclosed or suggested by Jones. Jones's failure to disclose SONET switching is made more apparent by the following:

"In general, the PHY module provides physical media dependent (PMD) and transmission convergence (TC) sub layer functionality prior to the ATM layer processing performed by the BIO 20." (Column 6, line 65 through Column 7, line 3).

Consistent with this description, Figure 2 of Jones clearly shows the BIO card 20 having an "ATM Layer". As an ATM layer precedes switch cards 32a, 32b in the traffic flow from the PHY modules to the switch cards 32a, 32b, the switch cards 32a, 32b can only be reasonably construed as ATM switch cards and not SONET switch cards. As such, Jones does not disclose an interface having the ability to mate to different types (e.g., ATM, SONET) of cards.

With respect to independent claim 21, the Examiner has rejected independent claim 21 under 35 USC 102(e) as being anticipated by US Pat. No. 6,359,859 (hereinafter, "Brolin"). In response, the Applicant has filed herewith an Affidavit of Prior Invention as provided under 37 CFR 1.131, along with supporting evidence, in order to "swear behind" the Brolin reference. As a consequence, the Brolin reference may not be used as prior art against the claims of the present application.

In light of the above arguments, independent claims 12 and 21 are not anticipated by any prior art reference; and, as such, they and their dependent claims are believed to be patentable. The Applicant therefore requests the allowance of all claims.


If there are any additional charges, please charge Deposit Account No. 02-2666.

If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact Robert B. O'Rourke at (408) 720-8300.

Respectfully submitted,

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Claim Amendments Showing Changes

The enclosed list of claim is a list of all claims including those that have not been amended in the present Office Action response.

Please cancel claims 1 through 11 and 32 without prejudice.

Please amend claims 12, 15, 17, 19, 21 as provided above.

12. (once amended) An apparatus, comprising:

- a) a backplane, said backplane having a plurality of switch card interfaces and a plurality of adapter card interfaces;
- b) each of said switch card interfaces having input/outputs in an arrangement that functionally mates to an ATM switch card and that functionally mates to a SONET switch card; and
- c) each of said adapter card interfaces coupled to each of said switch card interfaces, each of said adapter card interfaces having input/outputs in an arrangement that functionally mates to an ATM adapter card and that functionally mates to a SONET adapter card.

13. The apparatus of claim 12 further comprising an ATM switch card mated with one of said switch card interfaces and a SONET switch card mated with another of said switch card interfaces.

14. The apparatus of claim 13 further comprising an ATM adapter card mated with one of said adapter card interfaces and a SONET adapter card mated with another of said adapter card interfaces.

15. (once amended) The apparatus of claim [13]~~14~~ further comprising a hybrid SONET/ATM adapter card mated with one of said adapter card interfaces, each of said adapter card interfaces having input/outputs that functionally mate to said hybrid SONET/ATM adapter card.

16. The apparatus of claim 12 further comprising a first ATM switch card mated with one of said switch card interfaces, a redundant ATM switch card mated with another of said switch card interfaces and an ATM adapter card mated with one of said adapter card interfaces.

17. (once amended) The apparatus of claim 16 wherein said coupling between said adapter card interfaces and said switch card interfaces further comprises a plurality of major links, one major link between each said adapter card and each said switch card, each of said major links further comprising a plurality of minor links, each of said minor links further comprising a real data minor link and a redundant minor link.

18. The apparatus of claim 12 further comprising a first SONET switch card mated with one of said switch card interfaces, a redundant SONET switch card mated with another of said switch card interfaces and a SONET adapter card mated with one of said adapter card interfaces.

19. (once amended) The apparatus of claim 18 wherein said coupling between said adapter card interfaces and said switch card interfaces further comprises a plurality of major links, one major link between each said adapter card and each said switch card, a real data major link between said SONET adapter card and said first SONET switch card, a redundant major link between said SONET adapter card and said redundant SONET switch card.

20. The apparatus of claim 12 further comprising four said switch card interfaces and twelve said adapter card interfaces.

21. (once amended) A method, comprising:

- a) forming a first and second backplane according to a manufacturing process;
- b) integrating said first backplane into an [networking layer]ATM networking system; and

c) integrating said second backplane into a [physical layer]SONET networking system.

22. The method of claim 21 wherein said manufacturing process further comprises forming minor link conducting traces associated with a major link.

23. The method of claim 22 wherein said forming minor link conducting traces further comprises forming a pair of differential transmit conducting traces.

24. The method of claim 23 wherein said forming minor link conducting traces further comprises forming a pair of differential receive conducting traces.

25. The method of claim 21 wherein said manufacturing process further comprises forming system bus conducting traces.

26. The method of claim 21 wherein said manufacturing process further comprises forming clock traces.

27. The method of claim 21 further comprising affixing a card interface to said backplane.

28. The method of claim 27 further comprising affixing an adapter card interface to said backplane.

29. The method of claim 27 further comprising affixing a switch card interface to said backplane.

30. The method of claim 27 further comprising affixing a processor card interface to said backplane.

31. The method of claim 21 wherein said manufacturing process further comprises a lithographic process that employs a mask set.

Please add new claims 33 through 44.

33. (new) An apparatus, comprising:

a backplane from which a pair of networking systems can be implemented, said backplane having a plurality of switch card interfaces and a plurality of adapter card interfaces, each of said switch card interfaces having input/outputs in an arrangement that functionally mates to an ATM switch card and that functionally mates to a SONET switch card, each of said adapter card interfaces coupled to each of said switch card interfaces, each of said adapter card interfaces having input/outputs in an arrangement that functionally mates to an ATM adapter card and that functionally mates to a SONET adapter card, a first of said networking systems being an ATM system where ATM adapter cards are plugged into said adapter card interfaces and ATM switch cards are plugged into said switch card interfaces, a second of said networking systems being a SONET system where SONET adapter cards are plugged into said adapter card interfaces and SONET switch cards are plugged into said switch card interfaces.

34. (new) The apparatus of claim 33 wherein said backplane further comprises a conductive trace between one of said adapter card interfaces and one of said switch card interfaces, said conductive trace able to transport data between said adapter card interface and said switch card interface if said first networking system is being implemented, said conductive trace able to transport data between said adapter card interface and said switch card interface if said second networking system is being implemented.

35. (new) The apparatus of claim 34 wherein said backplane further comprises a plurality of conductive traces between one of said adapter card interfaces and one of said switch card interfaces, each of said conductive traces able to transport data between said adapter card interface and said switch card interface if said first networking system is being implemented, each of said conductive traces able to

transport data between said adapter card interface and said switch card interface if said first networking system is being implemented.

36. (new) The apparatus of claim 34 wherein each adapter card interface is coupled to each switch card interface by a separate conducting trace that connects each one of said adapter card interfaces to each one of said switch card interfaces, each conductive trace able to transport data between its adapter card interface and its switch card interface if said first networking system is being implemented, each conductive trace able to transport data between its adapter card interface and its switch card interface if said second networking system is being implemented.

37. (new) The apparatus of claim 36 wherein each adapter card interface is coupled to each switch card interface by separate pluralities of conducting traces that connect each one of said adapter card interfaces to each one of said switch card interfaces, each plurality of conductive traces able to transport data between its adapter card interface and its switch card interface if said first networking system is being implemented, each plurality of conductive traces able to transport data between its adapter card interface and its switch card interface if said second networking system is being implemented.

38. (new) The apparatus of claim 37 wherein each plurality of conducting traces has a redundant conducting trace to transport data to its corresponding switch card interface upon the failure of a switch card that is plugged into a switch card interface other than its corresponding switch card interface.

39. (new) The apparatus of claim 33 wherein said backplane can be used to implement three networking systems, a third of said three networking systems being a hybrid ATM/SONET system having at least one ATM adapter card plugged into a first adapter card interface and at least one SONET adapter card plugged into a second adapter card interface, said hybrid ATM/SONET system having at least one ATM switch card plugged into a first switch card interface and at least one SONET switch card plugged into a second switch card interface.

40. (new) The apparatus of claim 39 wherein a hybrid ATM/SONET adapter card may also be plugged into: 1) said first adapter card interface in place of said ATM adapter card; or, 2) said second adapter card interface in place of said SONET adapter card; or, 3) a third adapter card interface.

41. (new) The apparatus of claim 33 wherein said backplane further comprises a processor card interface, said processor card interface coupled to said switch card interfaces and said adapter card interfaces.

42. (new) The apparatus of claim 41 wherein said processor card interface is said coupled to said switch and adapter card interfaces with a bus

43. (new) The apparatus of claim 41 wherein said processor card interface is said coupled to said switch and adapter card interface with a clock trace.

44. (new) The apparatus of claim 43 wherein a processor card that plugs into said processor card comprises system clocking circuitry.